Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A conjugate for gene transfer, comprising an oligonucleotide intended to be transferred into a target cell and a hydrophilic polymer, wherein an end of the oligonucleotide is covalently linked to the hydrophilic polymer via an acid-cleavable linkage ~~selected from the group consisting of phosphoroamidate linkage and~~ which is an acetal bond.

2. (previously presented) The conjugate as set forth in claim 1, wherein the hydrophilic polymer is selected from non-ionic polymers having a molecular weight of over 500 daltons.

3. (original) The conjugate as set forth in claim 1, wherein the oligonucleotide has a molecular weight ranging from 1,000 to 50,000 daltons.

4. (original) The conjugate as set forth in claim 1, wherein the hydrophilic polymer is one or more selected from the group consisting of polyethylene glycol, polyvinylpyrrolidone and polyoxazoline.

5. (cancelled)

6. (previously presented) The conjugate as set forth in claim 1, wherein monomers of the oligonucleotide are linearly linked via a phosphodiester bond.

7. (previously presented) The conjugate as set forth in claim 1, wherein the oligonucleotide is an antisense oligonucleotide.

8. (previously presented) The conjugate as set forth in claim 7, wherein the antisense oligonucleotide comprises a nucleotide sequence complementary to a portion or entire nucleotide sequence of c-myc gene.

9. (withdrawn) A method of synthesizing a conjugate for gene transfer, comprising the steps of activating an end of an oligonucleotide, and covalently linking a biodegradable hydrophilic polymer to the end of the oligonucleotide.

10. (withdrawn) The method as set forth in claim 9, wherein a chemical compound activating a functional group at the end of the oligonucleotide is selected from 1-ethyl-3,3-dimethylaminopropyl carbodiimide (EDAC), imidazole, N-hydrosuccinimide (NHS) and dicyclohexylcarbodiimide (DCC), HOBt (1-hydroxybezotriazole), ρ-nitrophenylchloroformate, carbonyldiimidazole (CDI), and N,N-disuccinimidylcarbonate (DSC).

11. (withdrawn) A polyelectrolyte complex micelle formed from the conjugate for gene transfer of any one of claims 1 to 8 and a cationic polymer or cationic peptide, wherein formation of the micelle is driven by ionic interaction.

12. (withdrawn) The polyelectrolyte complex micelle as set forth in claim 11, wherein cationic peptide is KALA or protamine.

13. (withdrawn) The polyelectrolyte complex micelle as set forth in claim 11, wherein cationic polymer is one or more selected from polyethylenimine, polyamidoamine, polylysine, diethylaminoethyldextran, polydimethylamino-ethyl methylacrylate, and derivates thereof.

14. (withdrawn) A method of preparing a polyelectrolyte complex micelle, comprising inducing ionic interaction between the conjugate for gene transfer of any one of claims 1 to 8 and a cationic polymer or cationic peptide.